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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,715	05/24/2004	Kuo-Hsing Cheng	11586-US-PA	3714

31561 7590 03/16/2007

JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE
7 FLOOR-1, NO. 100
ROOSEVELT ROAD, SECTION 2
TAIPEI, 100
TAIWAN

EXAMINER

MOON, SEOKYUN

ART UNIT	PAPER NUMBER
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2629

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.		Applicant(s)	
	10/709,715		CHENG, KUO-HSING	
	Examiner		Art Unit	
	Seokyun Moon		2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. The applicants' arguments with respect to the rejection of claim 1 have been considered but are moot in view of the new ground(s) of rejection.
2. The applicants' arguments with respect to the rejection of claim 5 have been fully considered but they are not persuasive.

The applicants indicated that *"the Examiner appears to have ignored that the same gate line drives the pixels in the same row, as shown in said Drawing 2, while FIG. 3 of the present application indicates the same gate line is capable of driving the pixels either in the same row or in different row"* [pg 6 lines 3-6]. However, examiner respectfully submits that the applicants have failed to disclose such features in the claim 5.

The applicants further indicated that *"Nevertheless, when the gate lines corresponding to the Pixels 1 and 3 are set in the ON mode, the signals inputted through D1 and D2 are simultaneously outputted to the Pixel 1, the Pixel 3, and the Pixel on top of the Pixel 3 and at the left of the Pixel 1. Thereby, the polarities of the pixels are no longer the same as depicted in the Drawing 2"* [pg 6 lines 15-18]. Examiner respectfully disagrees. When the gate lines corresponding to the Pixels 1 and 3 are set in the ON mode, the signals inputted through D1 and D2 are NOT simultaneously outputted to the Pixel 1, the Pixel 3, and the Pixel on top of the Pixel 3 and at the left of the Pixel 1. First of all, the data signals of Kim are outputted to data lines time sequentially, and thus the data signals of Kim cannot be simultaneously outputted to the data lines. Even if it is assumed that the signals inputted through D1 and D2 are outputted simultaneously, the signal is not outputted to the pixel at the left of the Pixel 1. The pixel at the left of the Pixel 1 receives the signal transmitted through D0 rather than D1 or D2.

Therefore, Examiner respectfully submits that the applicants' arguments are not persuasive.

Remark

3. The subject matter disclosed in the specification of the application might be different and distinguishable from the disclosed prior arts. However, examiner respectfully submits that the applicants have failed to present such features of the invention of the application in the claims specifically enough to distinguish the invention of the application from the prior arts.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

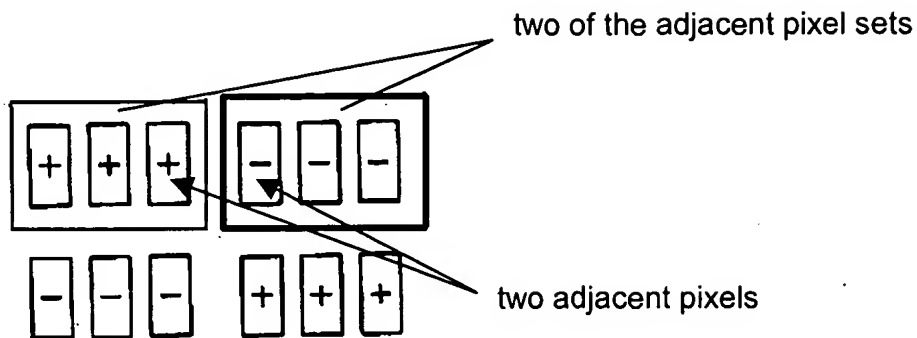
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1-7** are rejected under 35 U.S.C. 102(b) as being anticipated by Kim (US 2001/0015716).

As to **claim 1**, Kim teaches [fig. 6a] [par. (0052)] a driving method (providing a voltage with a specific polarity to each of a plurality of pixel sets) for a pixel array, at least one row of the pixel array comprising a plurality of pixel sets ("*pixel groups*"), and at least one of the pixel sets comprising a plurality of pixels ("*three pixels*"), the driving method comprising:

providing a plurality of voltages having substantially same phase to a plurality of pixel electrodes of the pixels of one of the pixel sets [drawing 1 provided on page 4 of this office action, which is equivalent to fig. 6a of Kim];

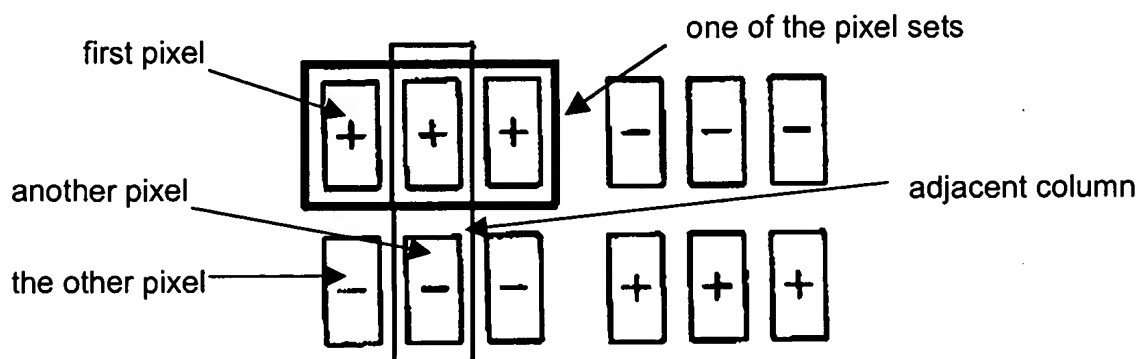


Drawing 1

providing at least two voltages with phases substantially opposite to each other to the pixel electrodes of the pixels of two of the adjacent pixel sets respectively [drawing 1 provided above];

driving two adjacent pixels in two of the pixel sets respectively by a gate line; and

driving a first pixel in one of the pixel sets and another pixel in an adjacent column of the first pixel by another gate line, wherein a phase of a voltage of a pixel electrode of the first pixel and a phase of a voltage of a pixel electrode of the another pixel are substantially different, and the first pixel and the another pixel are respectively in different rows of the pixel array [drawing 2 provided below, which is equivalent to fig. 6a of Kim]



Drawing 2

As to **claim 2**, Kim teaches each of the pixel sets comprising three pixels [drawing 1 provided above].

As to **claim 3**, Kim teaches that a number of the pixels of each of the pixel set is $3 \times M$, where M is a positive integer [drawing 1 of this office action].

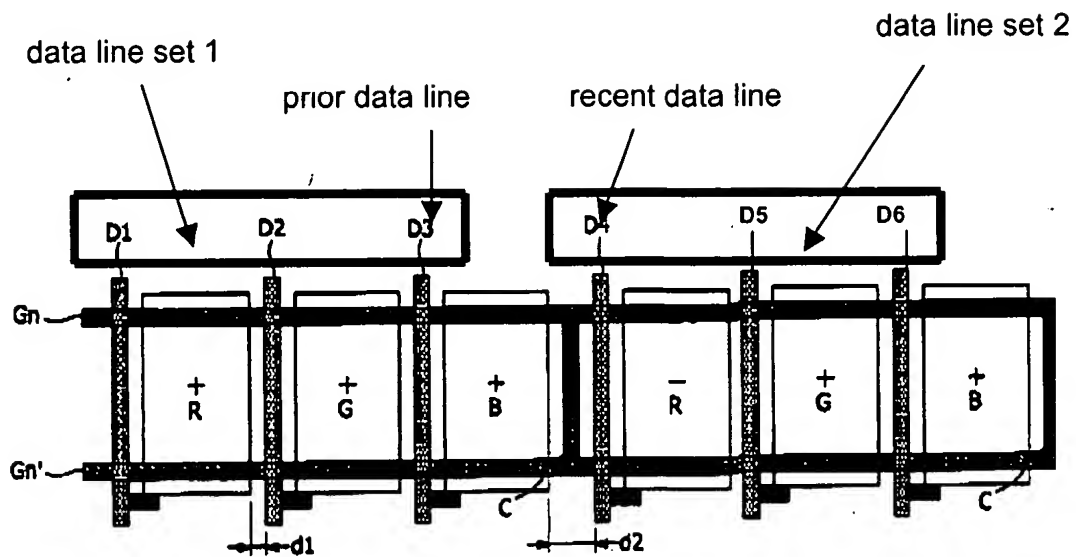
As to **claim 4**, Kim teaches the other pixel being disposed in an adjacent row of the first pixel [drawing 2 provided on page 4 of this office action].

As to **claim 5**, Kim [fig. 6a] [par. (0052)] teaches a driving method (providing a voltage with a specific polarity to each of a plurality of pixel sets) for a pixel array, each row of the pixel array comprising at least one pixel set, at least one of the pixel set comprising a plurality of pixels, and each pixel set corresponding to a data line set, the driving method comprising:

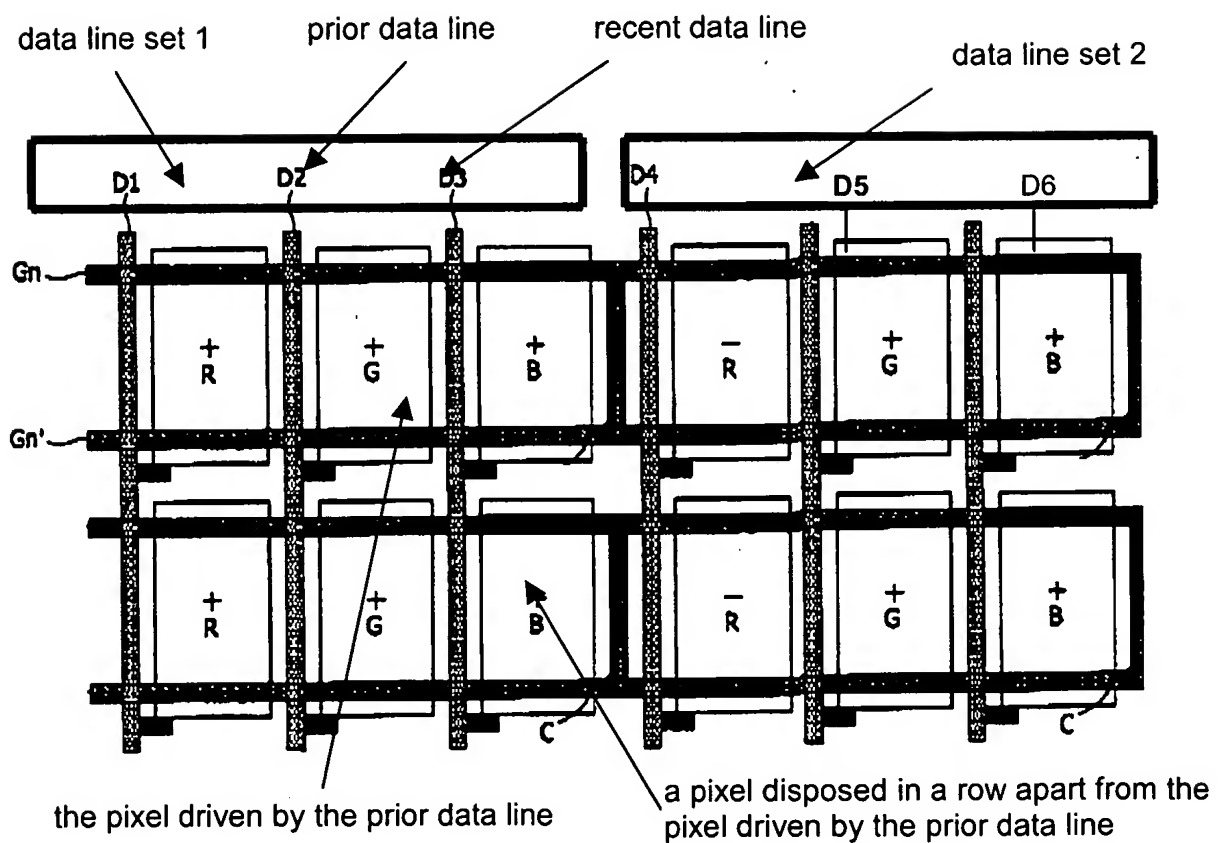
when the prior data lines and the recent data line do not belong to same data line set, the recent data line is used to drive the pixel disposed after the pixel driven by the prior data line [drawing 3 provided on page 6 of this office action, which is equivalent to figs. 6a and 10]; and

when the prior data line and the recent data line belong to same data line set, the recent data line is used to drive one of a pixel disposed in a row apart from the pixel driven by the prior data line [drawing 4 provided on page 6 of this office action, which is equivalent to figs. 6a and 10].

Kim inherently teaches a method of determining whether a prior data line and a recent data line belong to same data line set or not since it is required for the display of Kim to provide voltages having different polarities to each of different data line sets.



Drawing 3



Drawing 4

As to **claim 6**, all of the claim limitations have already been discussed with respect to the rejection of claim 2.

As to **claim 7**, all of the claim limitations have already been discussed with respect to the rejection of claim 3.

Conclusion

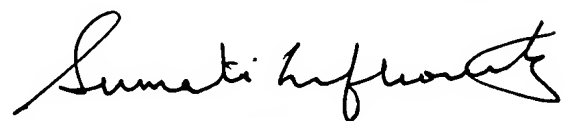
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seokyun Moon whose telephone number is (571) 272-5552. The examiner can normally be reached on Mon - Fri (8:30 a.m. - 5:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (572) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

03/10/2007

- s.m.



SUMATI LEFKOWITZ
SUPERVISORY PATENT EXAMINER